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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,949	11/02/2001	Stefano Gregori	854063.659	2938

500 7590 02/23/2005

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EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/015,949	Applicant(s) GREGORI ET AL.	
	Examiner Joseph D. Torres	Art Unit 2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. In view of the Amendment filed 12/15/2004, the Examiner withdraws all objections to the specification.

Claim Objections

2. In view of the Amendment filed 12/15/2004, the Examiner withdraws all previous objections to the claims.

Claims 28-31 are objected to because of the following informalities:

37 CFR 1.111 explicitly states "**In order to be entitled to reconsideration or further examination**", the applicant or patent owner must reply to the Office action. The reply by the applicant or patent owner must be reduced to a writing which distinctly and specifically points out the supposed errors in the examiner's action and must reply to every ground of objection and rejection in the prior Office action. **The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references**".

The Applicant has not presented any arguments explaining why newly amended and added claims 28-31 are believed to render the claims patentable over any applied references.

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Appropriate correction is required.

Response to Arguments

3. Applicant's arguments filed 12/15/2004 have been fully considered but they are not persuasive.

The Applicant contends, "The applicants respectfully disagree with the Examiner's enablement assertions. One of the steps of the error control method of claim 11 is 'encoding the converted first information word into a first codeword having $k+n$ coded symbols in the second base.' The specification and claim 16 specify that, in one embodiment, the encoding step multiplies the information word by a generating matrix (see, e.g., p. 7, line 11 - p. 8, line 16, p. 15, line 14 - p. 17, line 18., original claim 1).

The specification explains in great detail many steps for producing the generating matrix in various embodiments (see, e.g., p. 8, line 17 - p. 11, line 8; pages 19-23; and original claim 1). Since the encoding step of the error control method uses a generating matrix in the embodiment recited in claim 16, the steps of producing the generating matrix are inherently part of the encoding step of the error control method."

The Examiner disagrees and asserts that Figure 6 of the Applicant's disclosure (and more specifically steps 90 to 110 of Figure 6) explicitly teach that the steps in claim 16 are directed toward the design of error correction circuitry and not toward the error control method of claim 11 as depicted in Figure 8 of the Applicant's disclosure, hence claim 16 is directed to a different invention, since there is no indication in the

specification that the circuitry in Figure 8 is capable of carrying out the steps in claim 16 to design itself. The Examiner asserts that nowhere in the specification does the Applicant teach the use of the steps in Figure 6 of the Applicant's disclosure as part of the error control method of Figure 8 of the Applicant's disclosure, but instead teaches the steps in Figure 6 as a design process for designing error control circuitry.

The Applicant contends, "Claim 16 further defines the encoding step by reciting that 'the encoding step includes generating through an operation of multiplication between the first information word and a generating matrix.'"

The Examiner asserts that, although, the preamble in claim 16 pertains to an error control method, the body of claim 16 is still directed to a design process and is not directed to the same invention as the header in claim 16 nor the claimed invention of claim 11 for the same reasons as outlined in the previous paragraph.

The Examiner disagrees with the applicant and maintains all 112 rejections of claims 16-24.

The Applicant contends, "Okita and Choi simply do not convert input symbols from a first base into a second base."

Figure 1 and the Abstract in the Okita patent teach transforming an Reed-Solomon code $RS_a, RS_b, \dots RS_x$ (each Reed-Solomon code $RS_a, RS_b, \dots RS_x$ associated with respective Galois Fields $GF_a, GF_b, \dots GF_x$ with respective bases $a, b, \dots x$) to any other

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Reed-Solomon code RS_a, RS_b, \dots, RS_x corresponding to base elements a, b, \dots, x . Note: consecutive powers of α in GF_a form a basis for the Galois field GF_a and consecutive powers of β in GF_b form a basis for the Galois field GF_b . The basis (powers of α) is a fundamental or base structure for generating all elements of the Galois field GF_a and the new transformed basis comprising powers of β is a newly formed base structure for generating all elements of the Galois field GF_a .

The Applicant contends, "Okita explicitly states that the transformation is from Galois field $GF_a(2^m)$ to Galois field $GF_b(2^m)$, which means that the base is 2^m in both fields (col. 4, line 28; see also col. 10, lines 60-62)."

Nowhere does claim 11 even recite a Galois field much less how the claimed base is related to the Galois field. If the Applicant intends for base to refer to a specific component of a Galois field, the applicant should specify that in the claim language.

The Examiner disagrees with the applicant and maintains all rejections of claims 11-15 and 25-28. All amendments and arguments by the applicant have been considered. It is the Examiner's conclusion that claims 11-15 and 25-28 are not patentably distinct or non-obvious over the prior art of record in view of the references, Okita; Shigeru (US 6378104 B1) in view of Choi; Byeng-Sun (US 6233717 B1) as applied in the last office action, filed 07/15/2004. Therefore, the rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 16-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

See the Non-Final Action filed 07/15/2004 for detailed action of prior rejections.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 16-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections.

See the Non-Final Action filed 07/15/2004 for detailed action of prior rejections.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 11-15 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okita; Shigeru (US 6378104 B1) in view of Choi; Byeng-Sun (US 6233717 B1).

See the Non-Final Action filed 07/15/2004 for detailed action of prior rejections.

7. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okita; Shigeru (US 6378104 B1) in view of Choi; Byeng-Sun (US 6233717 B1).

See the Non-Final Action filed 07/15/2004 for detailed action of prior rejections.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

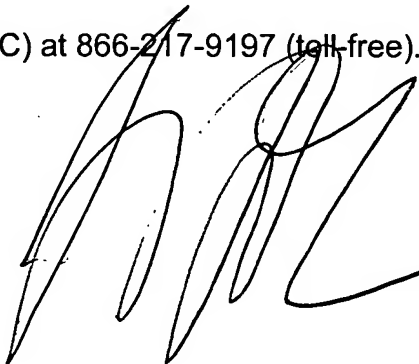
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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. D. Torres', is written over the signature line.

Joseph D. Torres, PhD
Primary Examiner
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